

Remarks

Applicant hereby adds new claims 33-44 and cancels claim 13. Accordingly, claims 1-12 and 14-44 are pending in the present application.

Claims 1-4, 6-10, 12-18, 20-25, 27-28 and 31-32 stand rejected under 35 USC 102(b) for anticipation by U.S. Patent No. 4,270,131 to Tompkins. Claims 5, 11, 19 and 26 stand rejected under 35 USC 103(a) for obviousness over Tompkins in view of U.S. Patent No. 6,263,002 to Hsu. Claim 29 stands rejected under 35 USC 103(a) for obviousness over Tompkins in view of U.S. Patent No. 5,832,012 to Araki. Claim 30 stands rejected under 35 USC 103(a) for obviousness over Tompkins.

Applicant respectfully traverses the rejections and urges allowance of the present application.

Referring to the anticipation rejections, Applicant notes the requirements of MPEP §2131 (8th ed., rev. 3), which states that TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Referring to claim 1, the Office on page 2 of the Office Action identifies reference 10 of Fig. 1 of Tompkins as allegedly disclosing the claimed light source. The Office on page 2 of the Action relies upon teachings of the Abstract of Tompkins as disclosing teachings of a sampled light beam used to control a drive level of the light source as defined in claim 1. Applicants respectfully assert the teachings of Tompkins fail to disclose or suggest limitations of claim 1 and claim 1 is allowable for at least this reason.

More specifically, Tompkins is clear at col. 4, lines 31+ that laser 10 generates the light beam 12 and acousto-optic modulator 20 performs varying of either amplitude or phase of the laser beam 12 *after generation of the light beam 12 by light source 10*. As disclosed at col. 4, lines 40+ of Tompkins, the modulator 20 is positioned to receive the light beam 12 generated by laser 10. Modulator 20 is configured to implement amplitude or phase modulation *of the received light beam 12*. As is clear from the teachings of Tompkins, modulation of the already

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generated light beam 12 is performed responsive to the output of photodetector 38 and *Tompkins fails to teach or suggest any control of a drive level of laser 10 responsive to the output of photodetector 38.* Accordingly, the teachings of Tompkins fail to disclose or suggest the claimed *detector assembly configured to sample a light beam and the sampled light beam is used to control a drive level of a light source configured to generate the light beam* as claimed. Positively-recited limitations of claim 1 are not taught nor suggested by the prior art and claim 1 recites patentable subject matter over Tompkins for at least this reason.

The claims which depend from independent claim 1 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to the rejection of claim 5, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, e.g., MPEP §2143.

Applicants respectfully submit the Office has failed to provide proper motivation to combine the reference teachings and the 103 rejection is improper for at least this reason. More specifically, it is baldly stated on page 7 of the Action that the combination is appropriate "because their unique structure offers significant advantages over conventional edge-emitting lasers." There is absolutely no evidence of record that the structures of Hsu would operate to provide any improvements compared with the laser 10 used by Tompkins. There is no evidence of record that the laser of Hsu may be appropriately incorporated into the invention of Tompkins or that any improvement would result if Tompkins were modified as baldly alleged by the Office. There is no evidence of record that the arrangement of Tompkins suffers from any deficiencies to motivate one to look to Hsu for meaningful teachings. Further, the alleged advantages with respect to the Hsu arrangement compared with conventional edge-emitting lasers are irrelevant inasmuch as there is no evidence that the laser 10 of Tompkins is an edge-emitting

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laser. The Office has failed to recite appropriate objective evidence of motivation to support the combination of reference teachings and the Office has failed to establish a proper *prima facie* rejection. Claim 5 is allowable for at least this reason.

Referring to claim 9, the apparatus includes limitations of previously pending claim 13 and recites the *control system configured to maintain the light source at a constant drive level during scanning of a single line of information on the photoconductor*. In support of the rejection of originally-pending claim 13, the Office relied upon the teachings of Tompkins at col. 4, lines 10-12. Applicants respectfully submit the teachings of col. 4 fail to disclose or suggest the limitations of claim 13 now incorporated into claim 9.

More specifically, the teachings at col. 4 of Tompkins relied upon by the Office baldly refer to "correction techniques" including beam intensity correction as provided by the output of the second comparator. Applicants have failed to uncover any reference in the teachings of col. 4 to a control system. Applicants have failed to uncover any reference in the teachings of col. 4 to maintenance of a light source at a constant drive level let alone the *maintenance of the light source at the constant drive level during scanning of the single line of information on the photoconductor* as specifically claimed. Positively recited limitations of claim 9 including the limitations of previously pending claim 13 are not disclosed nor suggested by the prior art and claim 9 is allowable for at least this reason.

The claims which depend from independent claim 13 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to claim 14, the apparatus comprises a *laser configured to generate a light beam*, and a control system configured to maintain a *drive level of the laser at a constant drive level during scanning of the line of information onto the photoconductor*. Limitations of claim 14 are not disclosed nor suggested by Tompkins and claim 14 is allowable for at least this reason.

More specifically, the Office on page 4 of the Action states that the modulator 20 allegedly discloses the claimed control system. As set forth by the teachings in col. 4, lines 40+ of Tompkins, the modulator 20 is positioned to

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receive light beam 12 generated by laser 10. Modulator 20 receives light beam 12 and amplitude or phase modulates the light beam 12. Applicants have failed to uncover any teachings of the modulator 20 of Tompkins providing any communication with laser 10. Tompkins fails to disclose or suggest the claimed *control system configured to maintain the drive level of the laser at a constant drive level during scanning of the line of information onto the photoconductor* as positively claimed. Applicants respectfully submit Tompkins fails to disclose or suggest limitations of claim 14 and claim 14 is allowable for at least this reason.

The claims which depend from independent claim 14 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 18 recites the laser scanning apparatus comprising *means for generating a light beam and means for maintaining the means for generating at a constant drive level using the indication of the sampled light beam during scanning of the line of information onto the photoconductor*. Tompkins discloses a modulator 20 which receives a light beam and implements modulation of the light beam responsive to output of photodector 38. Tompkins fails to disclose or suggest any control of light source 10 using photodetector 38. Applicants have failed to uncover any teachings regarding control of a generation of the light beam let alone the limitations of *maintaining a means for generating a light beam at a constant drive level using an indication of a sampled light beam* as positively claimed. Positively recited limitations of claim 18 are not disclosed nor suggested by the prior art and claim 18 is allowable for at least this reason.

The claims which depend from independent claim 18 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 22 recites a laser scanning method comprising *generating a light beam using a light source, sampling the light beam, and controlling the light source using the sampled light beam*. Tompkins discloses modulation of an already generated light beam using modulator 20. However, the modulation of an already generated light beam fails to disclose or suggest the claimed *controlling the light source*

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generating the light beam using the sampled light beam as defined in claim 22. Positively recited limitations of claim 22 are not disclosed nor suggested by the prior art and claim 22 is allowable for at least this reason.

The claims which depend from independent claim 22 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to independent claim 29, the laser scanning apparatus comprises a laser configured to generate a light beam, a sampling assembly configured to sample the light beam, and a *control system configured to control an intensity of the light beam generated by the laser responsive to the sampled light beam*. Claim 29 stands rejected under 103 over the teachings of Tompkins in view of the teachings of Araki. Tompkins discloses a laser 10 and Applicants have failed to uncover any teachings in Tompkins of the laser 10 being controlled let alone the claimed control system configured to control the intensity of the light beam generated by the laser responsive to the sampled light beam as defined in claim 29. Applicants have failed to uncover teachings in Araki which cure the deficiencies of Tompkins. Accordingly, positively recited limitations of claim 29 are not disclosed nor suggested by the prior art even if the prior art references are combined and claim 29 is allowable for at least this reason.

The claims which depend from independent claim 29 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to claim 31, the Office identifies teachings of col. 3, lines 4-18 of Tompkins as allegedly disclosing the claimed outputting the control signal to control the light source configured to generate the light beam. However, the identified teachings refer to circuitry of Fig. 3 configured to control modulator 20 and modulator 20 is configured to modulate a light beam already generated by laser 10 and accordingly the teachings with respect to modulator 20 fail to disclose or suggest the claimed control signal to control the light source configured to generate the light beam. In addition, the teachings in col. 9, lines 24-28 of Tompkins identified as allegedly teaching the claimed adjusting refer to control of amplitude

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modulation of already generated beams by modulator 20 which fails to disclose or suggest adjusting the control signal to control the light source or adjusting the control signal to adjust an intensity of the light beam generated by the light source. Applicants have failed to uncover any teachings of adjusting the intensity using the laser 10 of Tompkins. Limitations of claim 31 are not disclosed nor suggested by the prior art and claim 31 is allowable for at least this reason.

The claims which depend from independent claim 31 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Applicant hereby adds new claims 33-44. The new claims and the claim amendments are supported at least by Figs. 4, 5 and 7 and the associated teachings of the originally filed specification.

Applicant respectfully requests allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,
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